Arshvir (Arsh) Jhaj

Canadian Citizen
Personal Website: arshjhaj.github.io

Email: arshijhaj@outlook.com
LinkedIn: linkedin.com/in/ajhaj/
GitHub: github.com/arshjhaj
Phone: +1-778-288-1033

EDUCATION

University of British Columbia Vancouver, BC
M.Sc., Computer Science *September 2021 –*

- GPA: 4.0/4.0
- **Interests**: Theoretical machine learning, distributed systems, convex optimization, AI for social good (e.g., differential privacy, fairness). Advised by Prof. Danica Sutherland

University of British Columbia Vancouver, BC
B.Sc., Combined Major Computer Science and Mathematics *September 2016 – May 2021*

- GPA: 3.6/4.0
- Graduated with Distinction.

TECHNICAL SKILLS

- **Programming Languages**: Python, Java, JavaScript, TypeScript, C, C++, C#, MatLab (*in order of experience*)
- **Technologies**:   Git, Jira, Node.js, Jasmine, Mocha, Selenium, Maven, MongoDB, Jenkins (*in order of experience*)

EMPLOYMENT

University of British Columbia, Department of Computer Science Vancouver, BC
Teaching Assistant *May 2017 –*

- Teaching assistant for a variety of computer science courses (e.g., introductory programming, discrete mathematics, and advanced algorithms) for the majority of academic terms since July 2017.
- In Summer 2021, worked with Prof. Nicholas Harvey to develop a new course (CPSC 436R) on randomized algorithms, taught for the first time at UBC in September 2021.

University of British Columbia, Department of Computer Science Vancouver, BC
Research Assistant *May 2021 – August 2021*

- Worked with Prof. Nicholas Harvey on an open problem in **theoretical machine learning**. Primarily worked on improving known error estimates for stochastic subgradient descent on non-smooth convex functions. Funded by an NSERC Undergraduate Student Research Award (USRA), the premier undergraduate research award in Canada.

Dodge Data & Analytics Vancouver, BC
Software Quality Engineer Intern *January 2019 – April 2019*

- Involved in the backend development of product to search and filter construction projects and constructed-related products, chiefly using **Java** with limited exposure to **C# and ASP.Net** as well
- Identified two bottlenecks in the recursive filtering logic, resulting in a **42% performance increase**.
- Helped design and deploy frontend e2e tests written using **Selenium, Jasmine and Node.js**, as well as backend **REST API** tests using the Karate testing framework

SELECTED PROJECTS

- **ConnectX**: A **Java**-based application which allows the user to play Connect4 against an AI. The AI is based on a minimax algorithm which utilizes alpha-beta pruning.
- **tabSort**: A simple **JavaScript**-based Chrome extension which sorts tabs by site, using the **Chrome API**. Published on Chrome Web Store.
- **insightUBC**: A full-stack web app to query UBC courses. Developed with **Node.js, JavaScript and TypeScript**.

SELECTED AWARDS

- **Stanley M Grant Scholarship in Mathematics, University of British Columbia** *2021*
- **NSERC USRA Grant, Natural Sciences and Engineering Research Council of Canada (NSERC)** *2021*
- **Dean's Honour List, University of British Columbia** *2021, 2020*
- **Dean of Science Scholarship, University of British Columbia** *2020*